ACCIDENT DETECTION SYSTEM USING IOT BASED CLOUD COMPUTING TECHNOLOGY

Dr.Rajapraveen[1], Dr.Swati Sah[2], Dr.Vivak[3]

[1,2,3] *Dept.of CSE-SP, Jain University, India*

Abstract: The increase of accidents is due to dynamic traffic conditions on roads in day-to-day life. we proposed an accident detection system model on IoT and cloud. In this scenario, we suggest a model for accident detection, which will demonstrate crash avoidance and braking systems for the area of Adhoc vehicle networks such as the intelligent transport System, which focuses on road safety and communication between on road vehicles.

***Keywords*: Cloud Accident, IoT based accidents detection, IoT & cloud computing based system**

1. Introduction

The working procedure of link security, which communicates with cloud technology (remote access) and Internet of things to accomplish confidentiality, reliability, integrity and execution in a similar system. Emergency clinics handle certain patients and elderly persons that are at risk of dropping as they are at risk of versatility issues, and who may need rapid intervention in the occurrence of incident, that increases the need for rescue people to identify an error quickly and accurately. Elderly and patients with disabilities are allowed to wander in the premises in these areas, but appear to fall and to recover without assistance. Such mishaps may not be seen in understaffed offices immediately after the care has been postponed. The major concern to reduce the accidents is to support each other. In this paper we proposed a IOT integrated cloud computing technology to detect the occurred accidents on roads.

2. EXISTING SYSTEM

The number of vehicles steadily grows and the number of malfunctions increases proportionately. Ultrasonic slowing devices are used in inn vehicles to retain the malfunctions caused by this delay. The ultrasonic slowing mechanism focuses on the idea that vehicles must then brake when sensors are aware of the obstacle. This is an invention for automobiles to recognize that another vehicle or snag is approaching an impact and to stop the car as required, which is completed by the breaking circuit. Two ultrasound sensors are built into this system, preordained bifurcation happens before the light or heavy vehicle, ultrasonic-wave manufacturer.

A. ULTRASONIC TRANSMITTER

Every vehicle is equipped with uultrasonic wave beneficiary by that it will revert the ultrasonic wave motion from the obstruction, for blocking and isolating the vehicle reflected wave is to be measured.

At this time, servo engine based on recognition beat data is controlled using a PIC micro-controller, vehicle braking system was naturally monitor by the servo engine. However, using this technology two or four-wheeler vehicles will stop by detecting the obstacles to avoid an accident. A flag is provided to provide ultrasonic waves irregularly. By using ultrasonic wave transmitter, it will send the waves to the front of the predetermined division, for detecting huge extreme ranged obstacles in here we are using ultrasonic sensors, due to the reason it can be recognized easily.

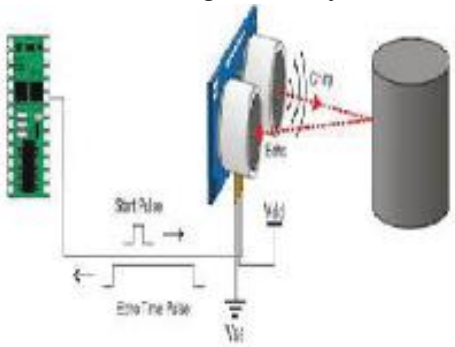

Fig 1: ULTRASONIC TRANSMITTER

B. ULTRASONIC RECEIVER

With the aid of a transducer, the ultrasonic wave has been transformed into a collection symbol, here enhancer is used for enhancing the flag, where it was integrated with reference movement and flag enhanced for identifying the enhanced flag segments which occurs due to obstacles.

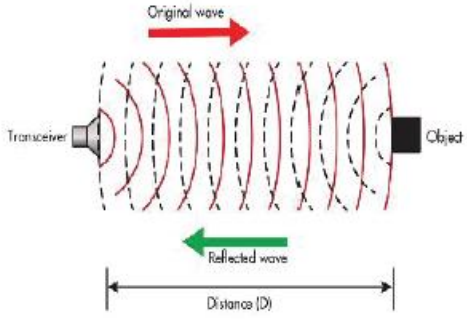

Fig 2: ULTRASONIC Acceptor

C. BRAKING CIRCUIT

The numbers of instructions for the activities in a wide variety range from 35 low-end PIC guidelines to about 70 top PIC guidelines. The managed computer-intensified flag for

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example is transmitted through MicroShip Innovation to the PIC braking circuit of the microcontrollers. Due to their minimum efforts and wide accessibility, PICs are used for this system function.

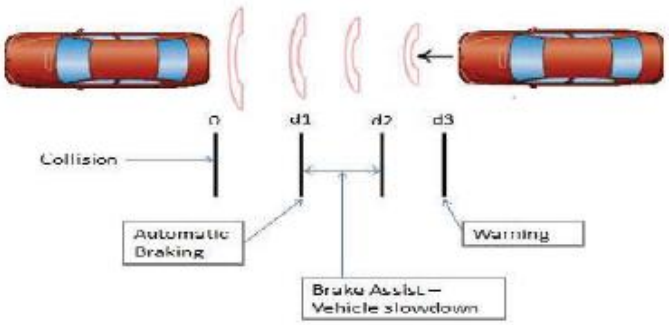

Fig 3: BRAKING CIRCUIT

3. PROPOSED SYSTEM

When a mishap occurs, it is distinguished by a spectacular sensor. A measurement is connected at that point to the sensor flag, and alongside some auxiliary data, the geographical area is forwarded to the PSO headquarters which shows an accident. This is a promising structure that is intended to contribute to the repetitive safety process by helping to safeguard it repetitively. The whole procedure is carried out with IOT and cloud computing, and this device controls the number of injuries.

This proposed system provides for a keen and strong IOT framework, which tells the PSO office, whatever the time a malfunction occurs, in flash and indicates its geographical location. The moment a malaise emerges, an impressive sensor differentiates.

4. WORKING PRINCIPLE

Two categories are included in this project. Next, they intend to use it to avoid the accident or whether the ambulance or the hospital has an accident. The ultrasound sensor helps avoid the accident.

A. GSM MODULE

- Facilitates the RS232 industry standard for the easy association of computers and various gadgets.
- Offers the simple and direct interface to micro controllers with a TTL sequence interface.
- A versatile sequential baud is permitted with the SIM300.
- Amid communication.

B. ULN2003 DESCRIPTION

The “uln2003” has an arrangement base resistor of 2.7kw, every pair of tasks that are immediately delayed by TTL or 5v CMOS, which interface differences the low level rational various fringe control stacks and hardware that incorporation of constant burden, ebb and flow assessments for the ULN20xxA/L High Dynamic Drive Series clusters.

similar power charges integrating 230w and more, it will be controlled with an adequate obligation cycle based on its highest rate of temperature and its total number of drivers-on. The loads for the mill include transfers of solenoids and motors, attractive hammers.

5. CONCLUSION

The paper introduces a multifaceted crisis requirement, the closest safe and secure data, integrity confidentiality, protection and validation system that offers six preconditions and seven security needs for the field of the confidential area, capability and security from non-competitive assaults and protection.

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